

the total length (without caudal), the length of the head three times; head about as high as long; snout as long as the eye, the diameter of which is two-sevenths of the length of the head, and more than the width of the interorbital space; jaws equal in length anteriorly, the maxillary extending to below the anterior margin of the orbit. Præorbital and angle of the præoperculum without serratures; opercles, throat, and isthmus entirely scaly; cheek with four series of scales. The dorsal fin commences above the end of the gill-cover, and terminates close by the caudal: its spines are of moderate strength and length, and can be received in a groove; those from the fifth to the ninth are the longest, not quite half as long as the head; the last two spines are equal in length; the soft dorsal is elevated and scaly at its base. The second and third anal spines are equal in length and strength, and scarcely longer or stronger than those of the dorsal fin; the soft anal is similar to the corresponding part of the dorsal. Caudal fin rounded, nearly one-fourth of the total length; without scales, except at the base. Pectoral rather narrow, extending as far backwards as the ventral, and shorter than the head; the ventral does not reach to the vent.

Scales with the margin entire; the upper part of the lateral line terminates below the middle of the soft dorsal, above the commencement of the lower part.

The jaws, vomer, and a narrow strip of the palatine bones are armed with bands of villiform teeth. The dentigerous plates on the roof and on the bottom of the mouth appear to have one undivided surface, no separate molar teeth being distinct: the upper is oblong, slightly tapering in front, rounded behind, and somewhat contracted in the middle; the lower is elliptical, and there is a smaller transverse plate behind the larger one.

One specimen,  $3\frac{1}{2}$  inches long, has been presented to the British Museum by Dr. F. Day. It was obtained within the hill-ranges of Travancore, on the Malabar coast, where the species does not appear to be very scarce.

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### BIBLIOGRAPHICAL NOTICE.

*Physical Geography for Schools and General Readers.*

By M. F. MAURY, LL.D. &c. 1864.

THIS is an interesting book for young people who have to learn the mutual influences of land, water, and air on the surface of the globe. The rivers, lakes, and seas conform to the shape of the ground, and their waters are taken up by the circulating air (or winds) to be again poured down as rain; and these processes, endlessly modified in different regions, and under different climates, both of zones and heights, variously affect the aspect of nature, chiefly through the

vegetable kingdom, thus influencing the distribution of Man upon earth, his commerce, arts, and habits. These are the chief points of Dr. Maury's little work, in which Hydrography and Meteorology have a prominent place, rather than what is usually called "Physical Geography."

The author herein brings the many good facts and theories collected and worked out by long and careful labour in his 'Sailing Directions' and 'Physical Geography of the Sea' to bear on the evidence of creative design in the arrangement of the "physical machinery of our planet," taking for his text, we may say, the words he quotes from Ecclesiastes, i. 7: "All the rivers run into the sea, yet the sea is not full; unto the place from whence the rivers come, thither they return again."

After some definitions of geographical terms, the reader learns something of water in rivers and the sea—what it is, and what it contains—and of ice and clouds. The air comes next, its weight and pressure, its constitution, its movements, and its power of carrying moisture; and the study of heat, in relation with the earth, air, water, and vapour, leads to meteorology and climate and the varied aspects of nature. Mr. Tyndall's eloquent expositions of the nature of heat are warmly welcomed in Captain Maury's pages. Currents of air at sea and on land, dry and moist winds, the distribution of rain, the general fitness of "terrestrial arrangements" and of "terrestrial adaptations," the "beauty and benignity" of natural phenomena, so well known to the "Christian philosopher" who looks to teleological conveniences as the great end and aim of nature,—all these are rather wearisomely illustrated and insisted upon by our hydrographist, whose well-connected facts would not be less clearly stated, nor less easily remembered, if given with less frequent allusions to the 'Sailing Directions,' on the one hand, and to the perfection of the "grand physical machine," on the other.

Given the sun as operator, water and air as machine, and earth as basis, the "physical machine" performs its office; and Books VII., VIII., and IX. treat of the power of heat, of the clouds, the rivers, and the sea (especially comparing the southern with the northern hemisphere), and of "the earth as we behold it." Man in relation to rivers running north and south, through different climatal zones (as the Mississippi, for instance), compared with east and west lines of traffic (as the Amazon or the Mediterranean),—Man in relation to maize as a food adapted for migration, and in relation to regions more or less cultivable, is here considered.

Of volcanic phenomena, of mountain-ranges, of the formation of table-lands, valleys, and other features Dr. Maury says nothing; but his little book is complete in itself, hydrographically considered. We would, however, that he knew something more of natural history—that he would not term the Coral "an insect of the sea"—"the Coralline," nor speak of Rhizopods as "microscopic insects," and, indeed, that he would not class as *insects* all little animals, both of land and water, "that are too small to be recognized as beasts, or birds, or fishes" (p. 122).